

IN THE SECTION MARKED "CLAIMS" PLEASE ADD THE
FOLLOWING NEW TEXT AND CLAIMS 15 THROUGH 32 AS WRITTEN
BELOW:

CLAIMS

What is claimed is;

15. Optoelectronic connector comprising a
package (1), an optical port (2), an electrical
port (3), an optoelectronic circuit positioned in
this package and connected to these two ports, the
optoelectronic circuit comprising a bare control
(5-7) and emission-detection (8) integrated
circuit chip, an internal wall (29) of the package
being provided with metallized connections (11),
pads (10) of this integrated circuit being
connected (12) directly to the metallized
connections, characterized in that it comprises
laser diodes (8), said laser diodes being firstly
laid out on a gallium arsenide substrate (43),
then deposited on an intermediate support (45),
this support being turned over in order to
transfer the laser diodes on the integrated
circuit, this connector constituting a basic unit
link.

16. Connector according to claim 15,
characterized in that the laser diodes (8) are
transferred (45) on the integrated circuit with a
space (50) between these diodes equal to a space
(21) between optical fiber terminations in the
optical port.

17. Connector according to claim 15,
characterized in that the package is an MID type
package with connection metallizations deposited
in a cavity of this package, contact armorings of

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the electrical port of this connector being formed by one of these metallizations.

18. Connector according to claim 17, characterized in that the MID type package is made by means of a method with metallizations in two passes.

19. Connector according to claim 17, characterized in that the package is connected to the integrated circuit by BGA type connections, wire bonding or anisotropic film technology.

20. Connector according to claim 17, characterized in that the shielding of the package is of an MID type.

21. Connector according to claim 15, characterized in that pads (10) of the integrated circuit are connected (12) directly to the metallized connections.

22. Connector according to claim 15, characterized in that the laser diodes are VCSEL diodes, preferably of the GaAs type.

23. Connector according to claim 15, characterized in that the optical port comprises an inclined mirror (19), preferably inclined at 45°.

24. Connector according to claim 15, characterized in that the optical port comprises a part (18) for positioning optical fiber terminations, this part abutting (23) a cant (24) of the integrated circuit.

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25. Connector according to claim 15, characterized in that the optical port comprises a limited access with two optical channels and in that the electrical port comprises contacts for electrical signals and contacts for a ground signal.

26. Connector according to claim 15, characterized in that the package is a module and comprises means (27, 28) to be stacked on another package.

27. Connector according to claim 15, characterized in that pads of the laser diodes are connected by connection wires directly to pads of the integrated circuit.

28. Connector according to claim 15, characterized in that the optoelectronic circuit comprises means to carry out a conversion of the signals available at the optical port into signals available at the electrical port and/or vice versa.

29. Method for mounting an optoelectronic connector comprising a package (1), an optical port (2), an electrical port (3), an optoelectronic circuit positioned in this package and connected to these two ports, the optoelectronic circuit comprising a bare control (5-7) and emission-detection (8) integrated circuit chip, said integrated circuit chip comprising laser diodes (8), an internal wall (29) of the package being provided with metallized connections (11), and pads (10) of this integrated circuit being connected (12) directly to the

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metallized connections, characterized in that it comprises following steps

- laser diodes (8) are laid out on a gallium arsenide substrate (43),
- they are deposited on an intermediate support (45),
- this intermediate support is turned over in order to face the integrated circuit, and then
- the laser diodes are transferred on this integrated circuit.

30. Method according to claim 29, characterized in that the intermediate support is a glass plate, and that

- said glass plate exists from the very time when laser diodes are laid out, and that
- the gallium arsenide substrate is etched in order to present the laser diodes over the glass plate.

31. Method according to claim 29, characterized in that laser diodes are deposited on the intermediate support with a spacing between each other equal to a space between two optical fibers (17-20) in the connector.

32. Method according to claim 29, characterized in that transfer of the laser diodes is done by laser insolation of the intermediate support.

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cont.